



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-------------------------|-------------|----------------------|---------------------|------------------|
| 09/773,863 | 02/01/2001 | Matthew Klapman | CS10686 | 8006 |
| 20280 | 7590 | 06/18/2004 | EXAMINER | |
| | | | SELBY, GEVELL V | |
| | | ART UNIT | PAPER NUMBER | |
| | | 2615 | | |
| DATE MAILED: 06/18/2004 | | | | |

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | | |
|------------------------------|------------------------|---------------------|--|
| Office Action Summary | Application No. | Applicant(s) | |
| | 09/773,863 | KLAPMAN ET AL. | |
| | Examiner | Art Unit | |
| | Gevell Selby | 2615 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on _____.
- 2a) This action is **FINAL**. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-23 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 1-23 is/are rejected.
- 7) Claim(s) _____ is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 01 February 2001 is/are: a) accepted or b) objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____. | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| | 6) <input type="checkbox"/> Other: _____. |

DETAILED ACTION

Specification

1. The disclosure is objected to because of the following informalities:

The specification is missing a “Brief Summary of the Invention” section. See MPEP § 608.01 (d) .

Appropriate correction is required.

Drawings

2. The drawings are objected to because In figure 5, step 509 and figure 7, step 707, the word “abstract” is misspelled “abstact”. Corrected drawing sheets are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as “amended.” If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. The replacement sheet(s) should be labeled “Replacement Sheet” in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. **Claims 1-4, 6-10, 12, 13, 15 – 19, 22, and 23 are rejected under 35 U.S.C. 102(b) as being anticipated by Hiroaki, US 5,786,846.**

In regard to claims 1 and 10, Hiroaki, US 5,786,846, discloses a method for indicating a location of a user of a two-way communication device with respect to video capturing volume of a camera operably coupled to the two-way communication device (see column 3, lines 20-26), the method comprising the steps of:

receiving at least one image from the camera (column 3, lines 27-29);
determining a location of the person with respect to the video capturing volume of the camera based on the at least one image (see column 3, lines 34-36);
generating an abstract representation of the person (see column 11, lines 1-15: An abstract representation of the person in the form of the local user's video or a picture an message is generated as a notification video); and
displaying the abstract representation to the person such that the abstract representation indicates the location of the person with respect to the video capturing volume of the camera (see column 10, lines 52-64).

In regard to claims 2 and 3, Hiroaki, US 5,786,846, discloses the method of claim 1, wherein the step of determining a location of the person comprises the step of determining locations of the person's head and other portions of the person (see column 8, lines 53-56).

In regard to claim 4, Hiroaki, US 5,786,846, discloses the method of claim 3, wherein the step of generating an abstract representation of the person comprises the step of generating a plurality of abstract representations, each of the plurality of abstract representations corresponding to a respective portion of the person, and wherein the step of displaying the abstract representation comprises the step of displaying the plurality of abstract representations such that the plurality abstract representations indicate the plurality of locations of the respective portions of the person with respect to the video capturing volume of the camera (see column 11, lines 1-15).

The abstract representations of each portion of the user are in the image filmed on the user side and when displayed as the notification video, each portion of the user is shown in its location with respect to the camera.

In regard to claim 6, Hiroaki, US 5,786,846, discloses the method of claim 1, wherein the step of displaying the abstract representation comprises the step of animating the abstract representation over a plurality of video frames (see column 11, lines 14 and 15 and column 6, lines 41-42: The notification video is show as an animated or motion picture.)

In regard to claim 7, Hiroaki, US 5,786,846, discloses the method of claim 1, wherein the step of determining a location of the person with respect to the video capturing volume of the camera comprises the steps of:

determining whether at least a portion of the person is represented in the at least one image (see column 3, lines 34-36); and

in the event that at least a portion of the person is represented in the at least one image, determining that the person is within the video capturing volume of the camera (see column 3, lines 37-40).

In regard to claim 8, Hiroaki, US 5,786,846, discloses the method of claim 7, wherein the step of displaying the abstract representation comprises the step of displaying the abstract representation to the person such that the abstract representation indicates the location of the person within the video capturing volume of the camera (see column 11, lines 12-15).

In regard to claim 9, Hiroaki, US 5,786,846, discloses the method of claim 7, wherein the step of displaying the abstract representation comprises the step of displaying the abstract representation to the person such that the abstract representation indicates that the person is outside the video capturing volume of the camera in the event that the at least a portion of the person is not represented in the at least one image (see column 11, lines 12-15).

In regard to claim 12, Hiroaki, US 5,786,846, discloses an apparatus that is operably coupled to a camera (see figure 3), the apparatus comprising:

a location determiner (see figure 3, element 101), operably coupled to the camera, for determining a location of the person with respect to a video capturing volume of the camera based on at least one image received from the camera, the at least one image including at least a portion of a person (see column 7, lines 1-15);

an abstract representation generator (see figure 3, element 302) for generating an abstract representation of the person (see column 10, lines 57-60 and column 11, lines 12-15: Using the local user image video serves as an abstract representations displaying the locate of the user with respect to the camera); and

a video processor (see figure 3, element 301), operably coupled to the location determiner and the abstract representation generator, for positioning the abstract representation in an image to be displayed to the person such that the abstract representation indicates the location of the person with respect to the video capturing volume of the camera (see column 10, lines 57-60: The video synthesis section displays the user's image or abstract representation on the screen to show the user that he/she is out of range.).

In regard to claim 13, Hiroaki, US 5,786,846, discloses the apparatus of claim 12, further comprising:

a display (see figure 3, display), operably coupled to the video processor, for displaying the image containing the abstract representation to the person (see column 10, lines 57-60).

In regard to claim 15, Hiroaki, US 5,786,846, discloses the apparatus of claim 12, further comprising a transmitter for transmitting the at least one image received from the camera to a remote device (see column 6, lines 50-63: It is inherent in the Hiroaki reference that a transmitter receives/transmits the video signal from the remote user in order to display it on the screen for the local user to see.).

In regard to claim 16, Hiroaki, US 5,786,846, discloses the apparatus of claim 12, wherein the location is an actual location of the person in the video capturing volume of the camera during a video frame processed by the camera (see column 11, lines 13-16).

In regard to claim 17, Hiroaki, US 5,786,846, discloses the apparatus of claim 12, wherein the location is a relative location change with respect to a plurality of video frames processed by the camera (see column 11, lines 13-16: The user image displayed is a continuous video or semi-motion video (see column 6, lines 42-43), so any change in the users position will be viewed over several frames.).

In regard to claim 18, Hiroaki, US 5,786,846, discloses the apparatus of claim 17, wherein the relative location change comprises at least one of a translation and a rotation (see column 11, lines 13-16: When the user is notified they are out of position by displaying the video, their translation from the out of range position to the in range position is also displayed.).

In regard to claim 19, Hiroaki, US 5,786,846, discloses the apparatus of claim 12, wherein the location comprises at least one of a position and a depth (see column 11, lines 13-16: The user video depicts the user position and/or depth by the location and size of the user in the image on the display.).

In regard to claim 22, Hiroaki, US 5,786,846, discloses the apparatus of claim 12, wherein the abstract representation further indicates a direction in which the person should move in order to be located substantially in a center portion of the video capturing volume of the camera (see column 11, lines 3-5 and 13-16: By seeing his/her image on the screen off-centered, the user will intuitively know which direct to move in order to be centered in the picture.).

In regard to claim 23, Hiroaki, US 5,786,846, discloses a two-way communication device (see figure 6) comprising:

a camera (see figure 6, element 602) for capturing an image within a video capturing volume of the camera to produce a captured image, the captured image including at least a portion of a user of the two-way communication device (see column 11, lines 13-16);

a location determiner (see figure 6, element 101), operably coupled to the camera, for determining a location of the person with respect to a video capturing volume of the camera based on at least one image received from the camera, the at least one image including at least a portion of a person (see column 7, lines 1-15);

an abstract representation generator (see figure 6, element 302) for generating an abstract representation of the person (see column 10, lines 57-60 and column 11, lines 12-15: Using the local users image video serves as an abstract representations displaying the locate of the user with respect to the camera); and

a receiver (see figure 6, element 601) for receiving an image from a second two-way communication device (see column 6, lines 50-63);
a video processor (see figure 6, element 301), operably coupled to the location determiner and the abstract representation generator, for arranging the abstract representation and the image received from the second two-way communication device together in a composite image to be displayed to the user such that the abstract representation indicates the location of the person with respect to the video capturing volume of the camera (see column 12, lines 4-30: The video synthesis section displays the both video images, user's image or abstract representation and the second user's video image, in secession or at the same time on the screen to show the user that he/she is out of range.).
a display (see figure 6, element 603), operably coupled to the video processor, for displaying the composite image to the user; and
a transmitter (see figure 6, element 601), operably coupled to the camera, for communicating the captured image to the second two-way communication device (see column 6, lines 50-54).

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hiroaki, US 5,786,846 in view of Wilensky, US 2002/0118875.

In regard to claim 5, Hiroaki, US 5,786,846, discloses a method of claim 1.

Hiroaki, US 5,786,846 does not disclose comprising the steps:

determining a location of at least one of another person and an object;
generating a corresponding abstract representation of the at least one of another person and an object to produce a second abstract representation; and
displaying the second abstract representation to the person such that the second abstract representation indicates the location of the at least one of another person and an object with respect to the video capturing volume of the camera.

Wilensky, US 2002/0118875 discloses a method and apparatus for extracting an object in the foreground of an image from the background of the image (see paragraph 33). The user can define multiple objects to be extracted, if the image contains multiple objects (see paragraph 36 and figures 1 and 6). Once the objects have been selected, the extraction process selects each object one at a time and generates three masks for each object (see paragraphs 42 and 55 and figure 5, steps 520-535). Finally, the images are assembled showing the objects against a new background (see paragraph 55). In an alternative implementation of the invention, one or more objects can be tracked automatically throughout a video sequence by selecting the objects in one initial keyframe (see paragraph 62).

It would have been obvious to one of ordinary skill in the art at the time of invention to have been motivated to modify Hiroaki, US 5,786,846 in view of Wilensky,

US 2002/0118875, to have the location detection section detect multiple objects positions and perform the steps of claim 5, in order to track the location of multiple objects throughout the video sequence.

7. Claims 11 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hiroaki, US 5,786,846.

In regard to claim 11, Hiroaki, US 5,786,846, discloses the method of claim 10, further comprising the step of receiving at least one image from a second two-way communication device (see column 10, lines 52-58).

Hiroaki, US 5,786,846, does not disclose, in this embodiment, the step of displaying the abstract representation together with the at least one image received from the second two-way communication device on the display of the two-way communication device.

Hiroaki, US 5,786,846, discloses that it is well known in the art to display the local user's on the screen with the together with the remote user's video (see figure 15 A-C and column 1, lines 28-40). The Hiroaki reference teaches that this is done to allow the local user to see video filmed from their site to confirm that he/she is located at an appropriate position in the shoot range of the camera.

It would have been obvious to a person skilled in the art at the time of invention to have been motivated to modify the Hiroaki reference to have the abstract representation of the local user's site displayed together on the same screen with the remote user's video in order to allow the local user to see video filmed from their site to

confirm that he/she is located at an appropriate position in the shoot range of the camera as taught by Hiroaki.

In regard to claim 14, Hiroaki, US 5,786,846, discloses the apparatus of claim 12, further comprising a second receiver (see figure 3, communication processing section), operably coupled to the video processor, for receiving an image from a remote device to produce a received remotely-generated image (see column 10, lines 52-58).

Hiroaki, US 5,786,846, does not disclose, in this embodiment, that the video processor positions the abstract representation together with the received remotely-generated image in an image to be displayed to the person such that the abstract representation indicates the location of the person with respect to the video capturing volume of the camera.

Hiroaki, US 5,786,846, does discloses that it is well known in the art to display the local user's on the screen with the together with the remote user's video (see figure 15 A-C and column 1, lines 28-40). The Hiroaki reference teaches that this is done to allow the local user to see video filmed from their site to confirm that he/she is located at an appropriate position in the shoot range of the camera.

It would have been obvious to a person skilled in the art at the time of invention to have been motivated to modify the Hiroaki reference to have the abstract representation of the local user's site displayed together on the same screen with the remote user's video in order to allow the local user to see video filmed from their site to confirm that he/she is located at an appropriate position in the shoot range of the camera as taught by Hiroaki.

8. Claims 20 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hiroaki, US 5,786,846 in view of Hindus et al., US 6,282,206.

In regard claim 20 and 21, Hiroaki, US, 5,786,846, discloses the apparatus of claim 12. The Hiroaki reference does not disclose that the abstract representation comprises an icon or a geometric shape but rather a video image (see column 11, lines 12-15).

Hindus et al., US 6,282,206, discloses a two-way video communication system that produces low bandwidth output in the form of cartooned video or reduced resolution video (see column 10, lines 15-20). The image captured on the local users side is passed through a dynamic abstraction filter to create a representational image or icon wherein the head and eyes of the person are in the shape of geometric circles (see figure 1, element 44 and column 10, lines 20-25). The reference teaches the representational image takes relatively few bits per second to transmit any dynamic updates to the image from the first communication station (see column 10, lines 25-29).

It would have been obvious to one skilled in the art at the time of invention to have been motivated to modify Hiroaki, US 5,786,846 in view of Hindus et al., US 6,282,206, to have a dynamic abstraction filter that produces cartooned icons of video images as geometric shapes in order to lower the bandwidth of the video data as taught by Hindus.

Conclusion

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The following art discloses two-way communication systems:

Art Unit: 2615

US 5,430,473,

US 5,999,207,

US 6,038,257.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gevell Selby whose telephone number is 703-305-8623. The examiner can normally be reached on 8:00 A.M. - 5:30 PM (every other Friday off).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's primary, Ngoc-Yen Vu can be reached on 703-305-4946. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

gvs



NGOC-YEN VU
PRIMARY EXAMINER